LLM Automated Evaluation Results

Functional Requirement Evaluation Table

Based on your requirements, I conducted a comprehensive review of the functional requirement document. The evaluation follows these principles:

• Data Entity Extraction: Only core data entities that need to be managed within the system are extracted from the functional requirements. External interfaces (e.g., external data sources or formats) are excluded. Core data entities are objects that are persistently stored in the system, such as emails, contacts, etc.

• Functional Requirement Merging: According to the rules (merging only when multiple requirements target the same operation on the same data entity; excluding general configuration-type requirements), no requirements were excluded, as the document does not contain general system settings (e.g., preferences or multilingual support). All merging rules were strictly followed. Since all requirements target different entities or operations, no requirements were merged. The total number of functional requirements after merging is 28.

• Hallucination Detection: A hallucinated requirement is defined as one that introduces a data entity that cannot be connected to existing entities, resulting in a disconnected E-R diagram. All entities are logically linked via operations (e.g., email and contact are connected through the send feature), so no hallucinated requirements were found.

Data Entity Extraction Results

The following 11 core data entities were identified from the functional requirements (i.e., objects managed within the system):

1. Email (FR-01, FR-02, FR-03, FR-04, FR-05, FR-13, FR-23, FR-24, FR-26, FR-27, FR-28)

2. Contact (FR-06, FR-20)

3. Task (FR-07, FR-08, FR-09, FR-10)

4. Folder (FR-05)

5. Mailing Group (FR-12, FR-22)

6. Permission (FR-11)

7. Archiving Policy (FR-14, FR-23)

8. Backup Policy (FR-15)

9. Reminder (FR-19)

10. User Account (FR-21)

11. Log (FR-18, FR-25; including audit, backup, and recovery logs, treated as a single entity)

| Functional Requirement | Hallucination | Evaluation Justification |

| FR-01: Email Sending Function | No | Involves the Email entity, associated with Folders and Contacts, with input/output defined. |

| FR-02: Email Receiving Function | No | Associated with Email, Contacts, and Logs entities; clearly defined. |

| FR-03: Email Formatting Function | No | Targets email drafts; clearly described with valid business meaning. |

| FR-04: Email Search Function | No | Involves Email and Folder entities; supports keyword-based queries. |

| FR-05: Folder Management Function | No | Explicitly involves the Folder entity; supports add, delete, and modify. |

| FR-06: Contact Management Function | No | Focuses on Contact entity; related operations are defined in the system. |

| FR-07: Task Creation Function | No | Involves Task entity; system must record details and generate identifiers. |

| FR-08: Task Modification Function | No | Clearly targets existing tasks; supports data versioning. |

| FR-09: Task Deletion Function | No | Involves Task ID; deletion result is concrete and identifiable. |

| FR-10: Task Progress Viewing Function | No | Presents task progress based on Task ID retrieval. |

| FR-11: Permission Assignment Function | No | Operates on Permission entity; tightly linked to User Accounts. |

| FR-12: Mailing Group Management Function | No | Mailing group is an independent entity; operations follow standard logic. |

| FR-13: Email Archiving Function | No | Involves Email and Archiving Policy; archiving actions are system-defined. |

| FR-14: Archiving Policy Management Function | No | Manages policy entities with clearly defined editing needs. |

| FR-15: Backup Policy Management Function | No | Related to policy entity; system supports configuration control. |

| FR-16: Data Backup Function | No | Combines multiple entities (Email, Task) and backup policy; process is logical. |

| FR-17: Data Recovery Function | No | Targets restoration of Email and Task entities; logic is clear. |

| FR-18: Recovery Log Recording Function | No | Involves Log entity; recording recovery behavior is basic ops requirement. |

| FR-19: Reminder Management Function | No | Manages Reminder entity with specific operation definitions. |

| FR-20: Contact Query Function | No | Uses query conditions to retrieve Contacts; aligns with system scope. |

| FR-21: User Account Management Function | No | Operates on User Accounts; a common and valid requirement. |

| FR-22: Mailing Group Creation Function | No | Explicit creation operation; system should generate unique ID. |

| FR-23: Email Archiving Policy Application Function | No | Specifies mapping between Emails and Policies; rules are clear. |

| FR-24: Email Expiration Handling Function | No | Manages lifecycle of emails; operations are reasonable. |

| FR-25: Data Backup Log Recording Function | No | Involves Log entity; log recording is necessary for backup tracking. |

| FR-26: Email Storage and Index Update Function | No | Manages Email storage and indexing; system architecture supports it. |

| FR-27: Email Auto-Categorization Function | No | Automatically classifies emails based on content and folder rules. |

| FR-28: Multi-user Email Synchronization Function | No | Manages shared editing of emails; supports multi-user coordination. |

Summary

Total number of data entities involved: 11 (Email, Contact, Task, Folder, Mailing Group, Permission, Archiving Policy, Backup Policy, Reminder, User Account, Log)

Total functional requirements after merging: 28 (all requirements target distinct entities or operations, no merging applied)

Number of hallucinated requirements: 0 (all requirements relate to core entities within system scope, maintaining weak connectivity in E-R model)

Number of non-hallucinated requirements: 28

Notes on Evaluation Strictness

A slightly stricter standard was applied (e.g., checking E-R diagram connectivity and completeness of input/output definitions), but the document quality is high and all requirements meet the evaluation criteria.

No over-merging: Each requirement remains independent due to targeting distinct operations (e.g., Task Creation vs. Modification).

No exclusion of general system settings: No preferences, multilingual support, or other general settings were found in the document.